

ABSTRACT OF THE DISCLOSURE

Systems and methods are disclosed to control the temperature of an RF hyperthermia system with minimum overshoot and to improve safety by, among other things, detecting a defective temperature sensor. Temperature overshoot may be minimized by compensating for the short-term temperature difference between the area being treated and the applicator delivering the RF energy. The RF energy may heat the tissue and then the tissue may transfer heat to the applicator sensor. The system may also adapt to various applicator sizes and shapes by modifying control loop coefficients based on initial probe response.

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